

WHAT IS CLAIMED IS:

1. An optical communications module comprising:

one or more dielectric substrates and a chassis,

said one or more dielectric substrates having an optical transmitter section,

5 an optical receiver section, or an optical transceiver section provided thereon,

the chassis encasing all of the dielectric substrates including said optical transmitter section, an optical receiver section, or an optical transceiver section provided thereon,

10 at least one of said dielectric substrates having a metal part formed on one side thereof, said metal part constituting at least a part or whole of an outermost surface of the chassis.

2. An optical communications module according to claim 1, wherein said at

15 least one dielectric substrate having the metal part formed on one side thereof comprises a metal base substrate.

3. An optical communications module according to claim 1, wherein said dielectric substrates are thermally connected together through a metal part

20 of said chassis.

4. An optical communications module according to claim 1, wherein said dielectric substrates are thermally separated from each other.

5. An optical communications module according to claim 1, wherein said chassis has one or more vents.

5 6. An optical communications module according to claim 1, wherein said one or more dielectric substrates comprise multilayer wiring substrates and an exposed surface of a grounding layer thereof has a metal plate adhered thereto, said metal plate being in thermal contact with the metal part of the chassis.

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7. An optical communications module according to claim 1, wherein said dielectric substrates comprise multilayer wiring substrates, and an grounding layer thereof has a heatsink provided on its exposed surface.

15 8. An optical communications module according to claim 1, wherein the metal part formed on one side of said one or more dielectric substrates is partially removed, exposing terminals or other components of said optical transmitter section, optical receiver section, or optical transceiver section, through the removed portion to the outside of the optical communications
20 module.